

## Effect of polymer shielding on elution of G3PDH bound to dye-ligand adsorbent

### ABSTRACT

Batch binding experiments were performed to assess the recovery performance of glyceraldehyde 3-phosphate dehydrogenase (G3PDH) bound to the unshielded and polymer (polyvinyl pyrrolidone, PVP)-shielded dye-ligand (Cibacron Blue 3GA) adsorbent. The adoption of a polymer-shielded, dye-ligand technique facilitated the elution efficiency of bound G3PDH. It was demonstrated that the recovery of G3PDH using polymer-shielded dye-ligand adsorption yielded higher elution efficiency, at 60.5% and a specific activity of 42.3 IU/mg, after a low ionic strength elution (0.15 M NaCl). The unshielded dye-ligand yielded lower elution efficiency, at 6.5% and a specific activity of 10.2 IU/mg.

**Keyword:** Dye-ligand; Cibacron Blue 3GA; G3PDH; Elution yield; Low ionic strength elution